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Structural modeling of dissatisfaction, complaint behavior, and revisiting intentions in hairdressing services

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Abstract

This study aims to present a comprehensive model that effectively explains dissatisfaction, complaint behavior, and revisiting intentions of hair service consumers through an empirical analysis. In order to empirically verify the conceptual model, a questionnaire was developed based on previous studies and responses that were collected through an online survey agency. Subjects were Korean female consumers in their 20s to 50s who experienced dissatisfaction with hair services in the salons they visited during the past year. The conceptual model suggested in the theoretical research was analyzed empirically through the structural equation modeling (SEM) test and finally suggested after ordering, eliminating unnecessary paths. According to the results, dissatisfaction with the hair service significantly affects the complaint behavior and the revisiting intentions while the complaint behavior has a mediating effect between dissatisfaction and the revisiting intentions. Analysis showed that dissatisfaction with human response services and private complaint behaviors are the factors that most negatively influence revisiting intentions. It was confirmed that businesses should focus on the management of the customer service delivered by the employees and on word of mouth. Public complaint behavior was proven to increase revisiting intentions of consumers, needing more attention. This study aims to provide plausible reasons and objective materials to the establishment of a solid theoretical base for the research on dissatisfaction, complaint behavior, and revisiting intentions of hair service consumers. It is expected that the results of this study will help create differentiated marketing strategies for unsatisfied and complaining consumers.

Keywords: Hairdressing service, Dissatisfaction, Complaint behavior, Revisiting intentions

Introduction

As a result of socioeconomic development and changing trends, aesthetic levels and consumer expectations are increasing, as are demands and consumption. Particularly, hairstyling has gained attention as it is considered a tool to express an individual's sense of beauty that is easy to style and change. In an era when appearance and image are paramount as personal values, it is not surprising that hairstyling is considered important to

represent identity as it can create diverse images and emphasize beauty (Lee 2009; Seo 2009).

Hair services are performed individually and consumers subjectively evaluate the services, being satisfied or unsatisfied. In other words, the same services can be evaluated differently according to the elements and levels involved. Furthermore, human services are difficult to standardize and vary depending on circumstances. In addition, it is not easy to evaluate a service beforehand and go back when the service proved to be unsatisfactory due to the diversity and complexity of hair services. Against this backdrop, it is expected that cases of dissatisfaction, complaint, and damage are increasing recently. The number of consumer damage cases received by 'the Korea Consumer Agency' related to hair services more than doubled, increasing from 199 in 2011 to 460 in 2017. The trend is evident in the fact that the cumulative total of counseling sessions for hair service dissatisfaction was 17,696 in '1372 consumer-counseling centers' between January 2017 and January 2019, ranked 11th in the service industry. Unfortunately, there has been no adequate research on the reasons for dissatisfaction in the hair care business or even suggestions for improvement. Up until now, research has been limited to satisfaction with hair services with similar variables (Lee and Kim 2014). Therefore, systematic approaches to variables related to consumer dissatisfaction and suggestions for differentiated marketing strategies should be made based on the results of these researches.

As a combination of tangible and intangible services, hair services have been studied under different constructs by several researchers. However, it is undisputed that hair services include material and human aspects as well as hairstyling as a result of treatments. Dissatisfaction occurs when there is a gap between the quality expected and the quality received by consumers for each factor of the service (Gardial et al. 1994). This causes consumer complaint behaviors, such as negative word of mouth, direct appeal to the service provider, or appeal to public agencies (Kim and Lee 2015). Still, not all consumers express their dissatisfaction with complaint behavior; most of consumers do nothing about it (Kim 2008). It implies that there are numerous latent dissatisfactions among consumers. Consumer complaints should be considered not only as negative indicators but also as a valuable source of information for development, and should be seen as opportunities to improve the quality of services.

Considering the fierce competition in the hair service industry, repurchase is necessary for service providers because it is more profitable to retain customers than to win prospective consumers (Dube et al. 2009). Moreover, it has been found that consumers with complaint behavior experiences are more likely to make repurchases than those without (Baek and Lee 2009). Briefly, it is necessary to understand how dissatisfaction and complaint behavior of hair service consumers affect their revisiting intentions and examine what effects the complaint behavior has as a mediator between dissatisfaction and revisiting intentions.

This study aims to present a comprehensive model that explains dissatisfaction and complaint behavior of hair service consumers and prove it empirically. The factors of dissatisfaction with hair services and the types of complaint behaviors in which they result will be discussed in order to discover their influence in revisiting intentions. It is expected that the measures suggested to promote consumer revisiting will help the development of the hair services industry.

Literature review

Dissatisfaction with and complaints about hair services

Dissatisfaction with hair services

Customers' expectations about hair services include several aspects, such as human services provided by hairstylists and other professionals, facilities, equipment, and environments. Hair service is a combination of different tangible and intangible interconnected service factors and consumer evaluation differs according to the individual construct and its levels.

According to Hwang and Hwang (2001), hair services can be divided into material services, such as tangibility, accessibility, and cleanness; human services, such as emotional consideration and competence of the staff; and policies, such as store management, reputation, credit card policies, and hairdressing technics. Kim (2004) also suggested that hair services include material aspects, staff, policies, and hairdressing technics. Kim (2010) stated that hair services constitute personal relationship, physical environment, and cosmetology skills in a study that examines the effects of hair services quality on customer satisfaction. Kim and Kim (2006) considered hair services in the dimensions of technique and technology and discovered that there are three factors of quality: technical, technological, and material. Jin (2010) confirmed that the quality of human and non-human services positively affects customer loyalty, revisiting intentions, and positive word of mouth. In a study analyzing the determinants of male customers' satisfaction with hair salons, the following hair service constructs were identified: environment, friendly staff, customer management, and technique-related services (Jeong 2011).

The hair service constructs suggested in the aforementioned studies can be summarized into three groups of factors: product services related to hairdressing techniques, human services, and material services. Product services are a result of hair dressing services, while human services concern the services' delivery process, and material services concern the environment in which the services are provided.

Lee and Kim (2014) categorized hair services into product services and non-product services. Product services are defined as services that have the function of a product and include cut, perm, coloring, styling, treatment, and shampooing. Non-product services include human and material services, while human services comprise hair care services and non-hair care service. In other words, human services are subdivided into hair care services, associated with hair care technics and emotional services, which integrates friendliness, response, and sympathy. This study divides human services into technical services and responses: friendliness and sincere attitude of employees are defined as human response services; services related to technics and results are defined as hair-styling services; material services comprise physical environments or services including facilities, equipment, tools, interior arrangement, and the atmosphere of the hair salon.

Although studies on customer dissatisfaction with hairdressing services have been conducted since Ryu's (2005) study, there are very few of them. Most of the studies on hairdressing services do not extend beyond measuring the quality of hairdressing services and identifying their effects on satisfaction. Although some studies since 2010 have investigated dissatisfaction, the number of such studies is extremely small. Ryu (2005) revealed that there was a high level of dissatisfaction with price, quality, and waiting time when the subjects used hairdressing services. Kim (2009) analyzed the factors in

customers' dissatisfaction with hair salons in terms of surrounding environment, hairstyling, customer friendliness, service, internal and external environments, employee image, amenities, and price. Among other hairdressing services, a study on haircut services revealed that dissatisfaction with the service had a significant effect on complaint behavior (Moon 2014). Noh (2015) categorized hairdressing service dissatisfaction as human response, hairstyling, post-hairdressing service, and complaint. In addition, Lee (2017) classified the customer dissatisfaction perceived by hairstylists as quality, facility, service, hairstyling, and price.

Studies on consumer dissatisfaction with hairdressing services have mainly focused on analyzing the frequency or comparison with the average. Various dissatisfaction factors have been used by different researchers. As examined above, most of the factors included tangible material services, employees' interpersonal human response services, or dissatisfaction with the hairstyle itself as a direct result of hairdressing services. Hence, as stated above, this study intends to examine customer dissatisfaction in three categories: material services, human response services, and hairstyling services.

Complaint behavior in hair services

Consumers revisit the establishments when they are satisfied with the result and the service delivery process but showed negative intentions about revisiting them when not satisfied (Lee et al. 2010). Such reactions to dissatisfaction, where consumers realize problems and make decisions about responses, can be considered as complaint behaviors (Angel et al. 1995). Consumer complaint behavior is becoming a necessary feedback mechanism in the field of marketing and one of the key elements to be understood in order to prevent sales reduction, unfavorable consumer attitude, and expenses (Nan 2008).

In general, complaint behavior includes behavioral and non-behavioral aspects (Park 2012). Earlier studies suggested a systematic classification of complaint behavior. Day and Landon (1977) offer a classification of consumer complaint behavior, based on a first distinction between no action and action, which further divides action into private and public action (Singh 1988; William and Teel 1983). No action means taking no actions at all; private action means warning friends or talking them out of buying, while public action includes seeking redress directly from the companies, taking legal action to obtain redress, or complaining to business, private, or governmental agencies. As some consumers complain through overt and covert behavior, it is essential to include non-behavior as an act of protest. This is also necessary to identify the overall composition of consumers' complaints (Han 1996).

Previous researches on complaint behavior of hair service consumers are extremely rare; there has been only one research that classified and discussed complaint behavior (Kim 2013). The researcher divided complaint behaviors into two categories: active and passive. Behaviors such as demands for redress, legal action, request for refund or exchange, and third-party complaint are categorized as active complaint behaviors, while passive complaint behaviors include no action, stopping buying, or negative word of mouth.

Items and variables of all existing researches on consumer dissatisfaction of hair services included no action, private, and public complaint behaviors. In order to conduct

an empirical analysis, this study established three dimensions of complaint behaviors: No action, which comprises taking no specific action or complaining; Private complaint behavior, which comprises spreading negative word of mouth to friends; and Public complaint behavior, which comprises seeking redress from the service provider or complaining to public organizations.

What is common among the above definitions of complaints is that complaint behavior is a consumer's response to dissatisfaction (Joung 1998). Consumers' complaint behavior is the result of a decision-making process where they are dissatisfied, after they are provided with a product or service (Park and Cho 2010). Consumers' complaint behaviors reportedly increase when the price is high, it takes too long to search, or it is likely to cause physical harm (Han 1996). Hairdressing services are very important as they include a high level of consumer engagement, serve as a means of expressing oneself, and show a high level of visibility. Furthermore, as services delivered by human skill, it is difficult to standardize the quality of hairdressing services; they are delivered differently for different people on different occasions. Additionally, hairdressing services are more likely to invite dissatisfaction or complaints because the original condition is hard to restore once services have been delivered. Even if a business is customer-oriented and equipped with a strong customer satisfaction system, it cannot be perfect in all aspects, and there is a good possibility that dissatisfaction might occur at any step of the service (Nan 2008).

Studies on hairdressing services are largely conducted on satisfaction. Many studies have verified that consumers recommend hairdressing services to other people and communicate positively by word of mouth when they are satisfied with a service (Kim 2007; Park 2005). From these findings, it can be predicted that private complaint behaviors, or negative word of mouth, increase when consumers are dissatisfied. When a consumer has a negative experience with a service, they communicate by word of mouth to resolve the discomfort from their experience and to prevent others from using the service. Such private complaint behaviors are especially important because they are vivid and convincing and have a large ripple effect on consumers who have not yet used the service (Lim et al. 2011).

Empirical studies on the relationship between hair service dissatisfaction and complaint behavior are scarce. Moon (2014) analyzed dissatisfaction and complaint behavior in the hair-cutting process. The author showed that there is a correlation between dissatisfaction in general areas, such as the consultation process, service process, and cutting technique, and complaint behavior. Among them, dissatisfaction with the service process was found to have a significant effect on complaint behavior. Ryu (2005) showed that higher dissatisfaction with the hair service leads to more complaint behavior. Ryu argued that complaint behavior plays an important role in resolving dissatisfaction.

Kim (2009) analyzed the relationship between complaint behavior and the factors related to consumer dissatisfaction at hair salons. In case of dissatisfaction with internal and external environmental factors and cost-related factors, it was shown that consumers complained privately, but actively, about the inconvenience to people around them. It was shown that dissatisfaction with hair treatment factors and cost-related factors lead to customers using different hair salons. Dissatisfaction with environmental factors lead them to directly complain to employees or managers. In addition, it was shown that factors related

to the environment, service, and the image of the employees had a significant effect on whether they were likely to take legal action to receive compensation, one of the dependent variables in the study. Dissatisfaction with charges led them to complain to the employees. However, dissatisfaction with the surrounding environment and the internal and external environment led to no response. Finally, dissatisfaction with factors related to the environment and the image of the employees led to active behavior of posting the inconvenience on the Internet.

Hair service consumers' general and damage-related dissatisfaction, and consequent complaint behavior are on the rise. Consumers' complaint behavior provides the opportunity to understand and deal with the contents of the complaint. Hence it should be used as an opportunity to identify problems related to complaints and to devise policy, development, and progress measures based on them.

From previous studies, we confirmed that dissatisfaction with hairdressing services works as a preceding variable for complaint behavior and that consumers show behavioral and non-behavioral responses when complaining. This study divided dissatisfaction with hairdressing services into material services, human response services, and hairstyling services while categorizing complaint behavior into no action, private complaint behavior, and public complaint behavior. We also predicted that dissatisfaction with hairdressing services would have an effect on complaint behaviors. As such, the following hypothesis has been established from the above:

Hypothesis 1 Dissatisfaction with hairdressing services will have a significant effect on complaint behaviors.

- 1-1. Dissatisfaction with material services will have a significant effect on no action.
- 1-2. Dissatisfaction with material services will have a significant effect on private complaint behavior.
- 1-3. Dissatisfaction with material services will have a significant effect on public complaint behavior.
- 1-4. Dissatisfaction with human response services will have a significant effect on no action.
- 1-5. Dissatisfaction with human response services will have a significant effect on private complaint behavior.
- 1-6. Dissatisfaction with human response services will have a significant effect on public complaint behavior.
- 1-7. Dissatisfaction with hairstyling services will have a significant effect on no action.
- 1-8. Dissatisfaction with hairstyling services will have a significant effect on private complaint behavior.
- 1-9. Dissatisfaction with hairstyling services will have a significant effect on public complaint behavior.

Intentions to revisiting hair service providers

Given the fierce competition among hair service providers, it is more effective to prevent existing consumers from leaving than to attract new consumers to achieve stable profits. Thus, companies can save marketing expenses and expect a steady generation of profit from positive word of mouth and repurchase of services by current customers (Dube et al. 2009). Repurchase intent is a key factor for a hair service provider to create sustainable profits and performance.

A substantial amount of research has confirmed that satisfaction with hair services increases revisiting intentions (Jeon and Jeon 2007; Jeong 2007; Song 2015). In contrast, consumer dissatisfaction also greatly affects their intentions to revisit; dissatisfied consumers are less likely to revisit the establishment than satisfied consumers (Choi 2015). Dissatisfaction and complaint behavior have negative influences on the maintenance of existing consumers. It is projected that dissatisfaction and complaint behaviors in the hair service industry also significantly and negatively affects the revisiting intentions of customers. The following hypotheses are established:

Hypothesis 2 Dissatisfaction with hairdressing services will have a significant effect on revisiting intentions.

- 2-1. Dissatisfaction with material services will have a significant effect on revisiting intentions.
- 2-2. Dissatisfaction with human response services will have a significant effect on revisiting intentions.
- 2-3. Dissatisfaction with hairstyling services will have a significant effect on revisiting intentions.

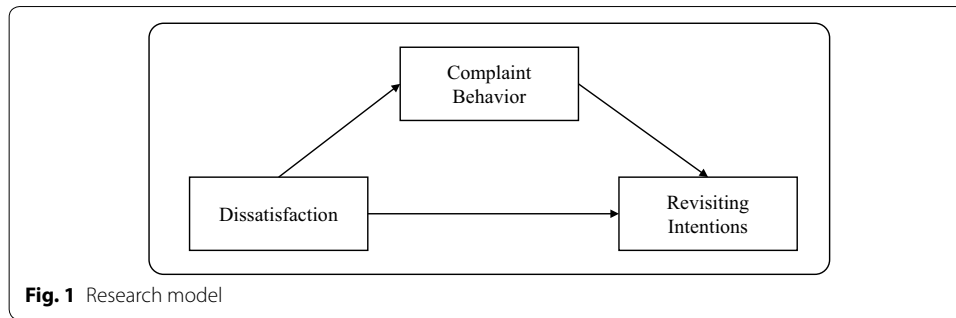
Hypothesis 3 Complaint behavior will have a significant effect on revisiting intentions.

- 3-1. No action will have a significant effect on revisiting intentions.
- 3-2. Private complaint behavior will have a significant effect on revisiting intentions.
- 3-3. Public complaint behavior will have a significant effect on revisiting intentions.

Methods

Research model and problems

Based on theoretical research, this study has established a research model as in Fig. 1 in order to examine the relationship among consumer dissatisfaction, complaint behavior, and revisiting intentions in the hairdressing service industry, as well as to identify the effects among variables. It intends to verify this model through structural equation modeling, as well as to check the suitability of the model. Then, it will verify the hypothesis by identifying the path and the influence of each variable.



Measuring tools

Dissatisfaction with hair services is divided into three dimensions: hairstyling services, human response services, and material services. For this study, the measurement items from the previous studies of Hwang and Hwang (2001), Park and Jang (2002), and Chung (2006) were modified and adjusted to 13 items. Complaint behaviors were categorized into the dimensions of no action, private complaint behavior, and public complaint behavior, which originated from the modification of ten items used in the studies of Han (1996), Hwang (2004) and Kim (2009). To measure revisiting intentions, three items were used adjusted from the studies of Song (2008) and Seok (2010). During the questionnaire survey, the subjects were instructed to recall an experience with a dissatisfactory hairdressing service and to respond about that service and any complaints they made at the time.

Data collection and analysis method

Three experts in fashion design and hairdressing reviewed and validated the questionnaire items, and a preparatory survey was conducted twice in September of 2016 in order to assess the adequacy of the items. Subjects are female consumers between their 20s and 50s who experienced dissatisfaction with hair services in the salons they visited during the past year. Data was gathered between October 24 and 30, 2016, by an online survey organization. A total of 570 responses were analyzed. SPSS 23.0 and AMOS 23.0 were used to conduct exploratory factor analysis, Cronbach's α , confirmatory factor analysis, and structural equation modeling (SEM) verification.

Results and discussion

Exploratory factor analysis (EFA)

In order to identify the dimensions of consumer dissatisfaction about the hair service, complaint behavior and revisiting intentions and verify the validity of the measuring tool, Exploratory Factor Analysis (EFA) was conducted as Principal Component Analysis using orthogonal rotation of Varimax. Cronbach's α was used to verify the reliability of the factors; after the first round of factor analysis, three items considered to have decreasing reliability were eliminated and the remaining items were submitted to the EFA.

Then, the Kaiser–Meyer–Olkin (KMO) and Bartlett’s tests were conducted to test the sphericity of the dissatisfaction variables. The KMO test resulted in 0.813, while the Bartlett’s test resulted in less than 0.05, which is the minimum value to be suitable for a factor analysis. The dimension of hair service dissatisfaction constituted 10 items in three dimensions, and the criteria was 1 or higher. Factor 1 was composed of items that measure dissatisfaction with facilities, equipment, cleanliness, and sanitation of hair salons and was referred to as Dissatisfaction with Material Services. Factor 2 was constituted of items that measure dissatisfaction with unkindness of the staff and hairstylists and others related to customer service, was referred to as Dissatisfaction with Human Response Services. Factor 3 considered the hairstyle after the styling service and was referred to as Dissatisfaction with Hairstyling Services. The total explanatory power of total variance for the three dimensions was 76.210 and the reliability coefficient was 0.7 or higher in all dimensions, proving internal consistency. The KMO test result for complaint behaviors in hair services was 0.759 and the Bartlett’s test result was less than a significant level of 0.05, which is the minimum suitable for factor analysis. As for the first dimension of complaint behaviors in the hair services, three dimensions with the value of 1 or higher were extracted out of the 10 items after the factor analysis. Factor 1 was constituted of items related to complaints to consumer agencies or public organizations and request for refund or free services, and was referred as to public complaint behaviors. Factor 2 was constituted of items related to complaints to friends and families and was referred as to private complaint behaviors. Factor 3 was constituted of items regarding taking no action and was referred as to no action. The total explanatory power of the three dimensions was 78.901% and the reliability coefficient for all dimensions was 0.7 or higher.

The result of KMO test for revisiting intentions was 0.773 and the Bartlett’s test result was less than a significant level of 0.05, which is the minimum suitable for factor analysis. A factor analysis was conducted for three items by asking if respondents were willing to revisit the hair salon after experienced dissatisfaction with their services, and found it is unidimensional. Items included statements about the revisiting intentions and willingness to use the service in the future, and were referred as to revisiting intentions. The total variance explanatory power was 90.000% and the reliability was high with a α -coefficient of 0.944. The results can be seen in Table 1.

Confirmatory factor analysis (CFA)

The AMOS 21.0 program was used to conduct the confirmatory factor analysis and verify the validity of the measurement variables used in this research. The factor structure was as follows: hair service dissatisfaction constitutes dissatisfaction about material, human response, and hairstyling services; hair service complaint behavior includes no action, private, and public complaint behavior; revisiting intentions have a single factor structure. The goodness of fit of the model was $\chi^2 = 614.490$, $df = 209$, $GFI = 0.913$, $NFI = 0.930$, $RMR = 0.038$, $RMSEA = 0.058$, and $AIC = 748.490$, which are within the criteria of goodness of fit; $GFI \geq 0.9$, $NFI \geq 0.9$, $RMR \leq 0.05$, $RMSEA \leq 0.1$.

Table 1 Result of exploratory factor analysis

Factor	Question	Factor loading	Eigen value	Variance (%)	Cronbach's α
Dissatisfaction					
With material services	The hair salon does not have good facilities	0.868	2.983	29.827	0.884
	The hair salon was dirty and unsanitary	0.854			
	The atmosphere of the hair salon was not comfortable	0.827			
	The hair salon was not well equipped with hair care devices	0.805			
With human response services	The employees of the hair salon (hairstylists or other staff) were unfriendly	0.881	2.451	24.510	0.885
	The employees of the hair salon (hairstylists or other staff) did not respond immediately to my request	0.867			
	The employees of the hair salon (hairstylists or other staff) were insincere	0.863			
With hairstyling services	I did not like the hair result	0.909	2.187	21.873	0.799
	It was not the hairstyle I wanted	0.857			
	The hairstyle did not look good on me	0.782			
	Total variance 76.210				
Complaint behavior					
Public complaint behavior	I usually go to a consumer agency or related organizations to seek settlements	0.905	2.965	29.655	0.881
	I take legal actions to seek redress	0.880			
	I do not pay for the hair care or ask for a refund if I already paid	0.828			
	I ask the hair salon for coupons, gift cards, or free services	0.785			
Private complaint behavior	I speak ill of the hair salon to my family, friends, and neighbors	0.916	2.498	24.980	0.898
	I actively spread my complaints to others	0.907			
	I talk my family and friends out of going to this hair salon	0.891			

Table 1 (continued)

Factor	Question	Factor loading	Eigen value	Variance (%)	Cronbach's α
No action	I let go without doing anything	0.896	2.034	24.267	0.872
	I do not make specific demands or actions	0.882			
	I put up with it without making any complaints	0.875			
Total variance 78.901					
Revisiting intentions	I will revisit this hair salon although there are things I am not happy about	0.953	2.700	90.000	0.944
	I will revisit this hair salon	0.949			
	I will continue to visit his hair salon in the future	0.945			
Total variance 90.000					

Table 2 Result of confirmatory factor analysis

Factor	Item	Factor loading	SE	CR	<i>p</i>	Standardized factor loading	AVE	Construct reliability
Dissatisfaction with material services	1-1	1.000	–	–	–	0.826	0.729	0.915
	1-2	0.992	0.045	22.223	0.000	0.827		
	1-3	1.045	0.046	22.555	0.000	0.837		
	1-4	0.887	0.045	19.641	0.000	0.752		
Dissatisfaction with human response services	1-5	1.000	–	–	–	0.843	0.738	0.894
	1-6	0.954	0.041	23.070	0.000	0.837		
	1-7	1.034	0.043	23.920	0.000	0.864		
Dissatisfaction with hair-styling services	1-8	1.000	–	–	–	0.962	0.709	0.876
	1-9	0.710	0.044	16.223	0.000	0.733		
	1-10	0.779	0.055	14.094	0.000	0.620		
No action	2-1	1.000	–	–	–	0.871	0.734	0.892
	2-2	0.885	0.041	21.727	0.000	0.818		
	2-3	0.927	0.043	21.583	0.000	0.812		
Private complaint behavior	2-4	1.000	–	–	–	0.860	0.740	0.895
	2-5	1.060	0.041	25.852	0.000	0.881		
	2-6	1.100	0.044	24.945	0.000	0.854		
Public complaint behavior	2-7	1.000	–	–	–	0.949	0.706	0.903
	2-8	0.914	0.027	35.581	0.000	0.904		
	2-9	0.711	0.034	20.774	0.000	0.699		
	2-10	0.673	0.038	17.507	0.000	0.626		
Revisiting intentions	3-1	1.000	–	–	–	0.929	0.841	0.941
	3-2	0.949	0.025	38.138	0.000	0.924		
	3-3	0.952	0.026	37.036	0.000	0.913		

Results of the convergent validity test

Factor loading, significance, AVE, and construct reliability were reviewed in order to test the convergent validity of each factor. All factor loadings were 0.5 or higher at $p < 0.001$

and the C.R. value was 1.965 or higher. AVE was higher than 0.5, and construct reliability was higher than the reference value of 0.7, which guarantees the convergent validity for all the constructs (see Table 2).

Results of the discriminant validity test

Average variance extracted and squared correlation coefficient of variables were compared in order to test the discriminant validity of the variables. The result showed that the squared correlation coefficient of variables was higher than the AVE and that a discriminant validity was established among the latent variables (see Table 3).

Structural equation modeling (SEM)

Results of the structural equation modeling (SEM)

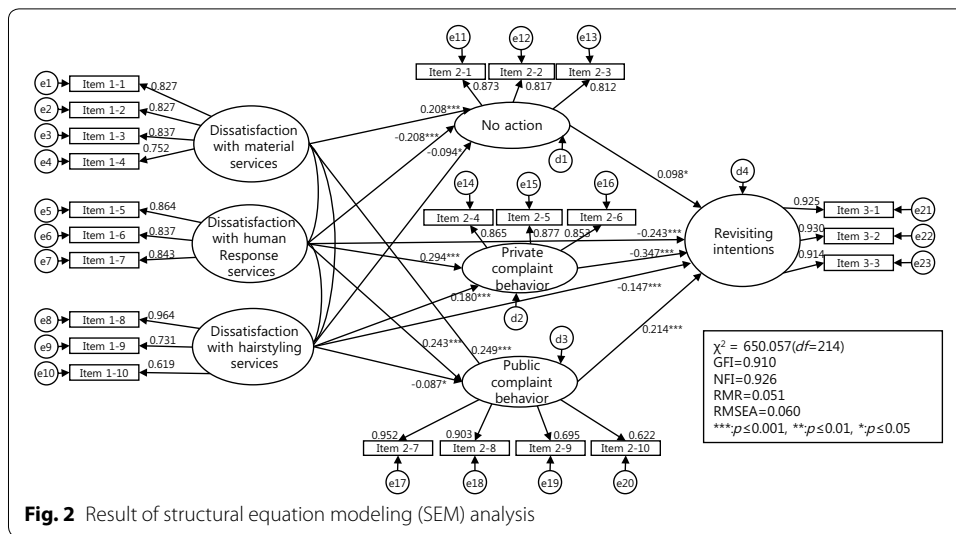
Based on the theoretical study, a research model on complaint behavior of consumers unsatisfied with the hair service and loyalty towards the hair salon was tested using the SEM. The goodness of fit index of the model was $\chi^2=649.034$, $df=212$, $GFI=0.910$, $NFI=0.926$, $RMR=0.052$, and $RMSEA=0.060$, which is a satisfactory level. The analysis results revealed two paths: ‘dissatisfaction about material service → private complaint behavior’ and ‘dissatisfaction about material service → revisiting intentions’, which were lower than the significant level of 5% ($p \leq 0.05$). In order to complete the final model, the least significant path was eliminated in order to make all the paths significant. The final model, with no insignificant paths, was analyzed through the SEM method and the results are shown in Fig. 2. The goodness of fit of the model was also satisfactory at $\chi^2=650.057$, $df=214$, $GFI=0.910$, $NFI=0.926$, $RMR=0.051$, and $RMSEA=0.060$.

Table 3 Average variance extracted and squared correlation coefficient of variables

Factor	Dissatisfaction with material services	Dissatisfaction with human response services	Dissatisfaction with hairstyling services	No action	Private complaint behavior	Public complaint behavior	Revisiting intentions
Dissatisfaction with material services	0.729 ^a						
Dissatisfaction with human response services	0.275 ^b	0.739 ^a					
Dissatisfaction with hairstyling services	0.001 ^b	0.017 ^b	0.709 ^a				
No action	0.010 ^b	0.010 ^b	0.013 ^b	0.734 ^a			
Private complaint behavior	0.017 ^b	0.096 ^b	0.048 ^b	0.019 ^b	0.740 ^a		
Public complaint behavior	0.144 ^b	0.125 ^b	0.003 ^b	0.027 ^b	0.057 ^b	0.706 ^a	
Revisiting intentions	0.013 ^b	0.093 ^b	0.078 ^b	0.024 ^b	0.179 ^b	0.002 ^b	0.841 ^a

^a Average variance extracted of variables (AVE)

^b Squared correlation coefficient of variables



Dissatisfaction with material services did not support a path leading to private complaint behaviors or intention to revisit. This implies that it would not have an effect on negative word of mouth or intention to revisit, even when hairdressing service consumers are dissatisfied with material services such as a hair salon’s facility, interior, or equipment. Hairdressing businesses have standardized interiors, facilities, and equipment, as well as an increased quality of material services when part of a brand or franchise. In addition, material services can still be evaluated when customers have not personally received any service, and better access to information through the Internet and smartphones allows consumers to identify and select the material service level ahead of the time. More importantly, trust or loyalty to a hairstylist seemingly precedes material services, as hairdressing services are primarily based on hairstylists’ skills. According to the results of Chung (2006) study, which found that hair salon facilities did not have an effect on establishing human loyalty, it is inferred that consumers revisit a hair salon once human loyalty is established, even if they are dissatisfied with the material services. This is consistent with the aforementioned finding that showed no correlation between dissatisfaction with hairstyling services and dissatisfaction with material services.

Causal relationship (mediating effects) analysis

The effects decomposition was conducted in order to analyze the mediating effect of the complaint behavior between the customers’ dissatisfaction and the revisiting intentions in the hair service business. Direct and indirect effects between variables and total effects were identified and statistical significance was analyzed for direct and indirect effects.

The path coefficients were 0.208 for ‘dissatisfaction about material service → no action,’ –0.294 for ‘dissatisfaction about human response service → no action,’ –0.094 for ‘dissatisfaction about hairstyling service → no action,’ and 0.180 for ‘dissatisfaction about hairstyling service → private complaint behavior.’ The path coefficient was 0.249 for ‘dissatisfaction about material service → public complaint behavior,’ 0.243 for ‘dissatisfaction about human response service → public complaint behavior,’ –0.087 for ‘dissatisfaction

about hairstyling service → public complaint behavior', 0.098 for 'no action → revisiting intentions', -0.347 for 'private complaint behavior → revisiting intentions', and 0.214 for 'public complaint behavior → revisiting intentions', which means that all the paths have direct effects only. In relation to consumer dissatisfaction about hair services through complaint behavior as a mediator to revisiting intentions, 'dissatisfaction about material service → revisiting intentions' has an effect of 0.074 only through indirect effects while 'dissatisfaction about human response service → revisiting intentions' has a direct effect of -0.243 and indirect effect of -0.070. In contrast, 'dissatisfaction about hairstyling service → revisiting intentions' has a direct effect of -0.147 and an indirect effect of -0.090, totalizing an effect of -0.237. The indirect effects between no action and private complaint behavior or public complaint behavior were proven significant when being tested with the bootstrapping technique. In particular, the path 'dissatisfaction about material service → revisiting intentions' was mediated via no action and public complaint behavior, while the path 'dissatisfaction about human response/hairstyling service → revisiting intentions' was partially mediated via complaint behavior.

It was discovered that consumers tend to stay silent and take no actions even if they were unhappy about material aspects of the service, such as facilities of the hair salon, interior design and atmosphere, cleanliness, or equipment. However, consumers do not tolerate when employees are unfriendly or careless. Consumers of hair services are likely to spread negative word of mouth when they are disappointed with the hair stylists, staff of the hair salon, or the hairstyle itself. In addition, when they are not happy with the facilities of the salon, an uncomfortable atmosphere, an unsanitary environment, an inadequate equipment, or an unfriendly staff, they tend to resort to public complaint behavior in order to seek a solution. In contrast, when they do not like the finished hairstyle, it is unlikely that they present public complaint behaviors. The result of hair care or hair styling service totally depends on the stylist's skills. When consumers are not satisfied with the hairstyle, they tend to resort to private measures, such as talking to the stylist at the salon, instead of making public complaints. It is understandable that customers do not rely on public complaints for fear of hurting the feelings of the responsible hairstylist, choosing to speak directly to them to resolve the situation.

According to the analysis, consumers being unsatisfied with material services do not affect revisiting intentions themselves, but increases revisiting intentions if mediated by no action or public complaint behavior. When hairstylists or staff of the hair salon are unfriendly or insincere, consumers tend to resort to complaint behavior; if it is a public complaint behavior, such as seeking redress or taking legal actions, it increases revisiting intentions of consumers. It is interpreted that the settlement of complaints through the public complaint behavior causes customers to revisit. In contrast, a private complaint behavior, such as rapping out a complaint to friends or family members or not acting in any way, further decreases their revisiting intentions. Moreover, when consumers are not satisfied with the hairstyle done, they do not revisit or have complaint behaviors, further curtailing the revisiting intentions.

Even when unsatisfied with the service, consumers tend to intend to revisit the hair salon when they let it go without doing anything, because what they were not happy about was not serious or important. In other words, they revisit the establishment when their problems are acceptable. In addition, when they complaint directly to the hair

Table 4 Direct effect, indirect effect and total effect analysis

Dependent variable	Independent variable					
	Dissatisfaction with material services	Dissatisfaction with human response services	Dissatisfaction with hairstyling services	No action	Private complaint behavior	Public complaint behavior
No action						
Direct effect	0.208***	-0.208***	-0.094*	-	-	-
Indirect effect	-	-	-	-	-	-
Total effect	0.208	-0.208	-0.094	-	-	-
Private complaint behavior						
Direct effect	-	0.294***	0.180***	-	-	-
Direct effect	-	-	-	-	-	-
Total effect	-	0.294	0.180	-	-	-
Public complaint behavior						
Direct effect	0.249***	0.243**	-0.087**	-	-	-
Indirect effect	-	-	-	-	-	-
Total effect	0.249	0.243	-0.087	-	-	-
Revisiting intentions						
Direct effect	-	-0.243***	-0.147***	0.098*	-0.347***	0.214***
Indirect effect	0.074**	-0.070**	-0.090**	-	-	-
Total effect	0.074	-0.312	-0.237	0.098	-0.347	0.214

*** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

service provider or complain publicly to third parties, their revisiting intentions increase. This implies that it is important to let consumers officially express their dissatisfaction. In contrast, consumers do not use the hair service provider again when they complain privately about their dissatisfaction. The results are shown in Table 4.

Based on the above results, hypotheses 1-1, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 2-2, 2-3, 3-1, 3-2 and 3-3 were adopted, while hypotheses 1-2 and 2-1 were dismissed.

Conclusion

This study aimed to establish a model that could identify and effectively explain the relationship among consumer dissatisfaction, complaint behavior, and revisiting intentions in the hair service business for a comprehensive analysis. The findings of the study can be summarized as follows.

First, the dimensions of hair services consumers’ dissatisfaction were identified as material service, human response service, and hairstyling service, and total variance was of 76.210%. The types of complaint behavior expressing dissatisfaction with hair services were no action, private complaint behavior, and public complaint behavior, with the explanatory power of 78.901%. It was revealed that revisiting intention is unidimensional, with a total explanatory power of 90.000%.

Second, the confirmatory factor analysis was conducted in order to verify if all constructs can be stably separated. The results showed that the goodness of fit satisfied the standards and proved suitable based on logical foundation. Construct validity and discriminant validity have also been satisfied.

Third, the conceptual model suggested in the theoretical research was empirically analyzed through the SEM test. Then, the final model was suggested by the ordering of paths and the mediating effects were analyzed in order to confirm the direct and indirect effects of the paths among the variables. According to the results, dissatisfaction about material services positively affects 'no action' and public complaint behavior, and direct paths from dissatisfaction with material service to revisiting intentions proved insignificant and mediated via complaint behavior. Furthermore, dissatisfaction with human response services negatively affects 'no action' and revisiting intentions, and positively affects private and public complaint behaviors. The path from dissatisfaction with human response services to revisiting intentions was partially mediated via complaint behaviors. In addition, dissatisfaction about hairstyling service negatively affects no action, public complaint behavior, and revisiting intentions and positively affects private complaint behaviors. The path from dissatisfaction with hairstyling services to revisiting intentions was partially mediated via complaint behaviors. In addition, no action and public complaint behavior positively affects revisiting intentions, while private complaint behavior negatively affects revisiting intentions.

This study has some implications. First, unlike most preceding studies on hair services focusing on consumer satisfaction, this study pays attention to dissatisfaction and complaint behavior of consumers.

Second, the dimensions and constructs of hair service dissatisfaction and complaint behavior were identified in order to prove their reliability and usefulness.

Third, unlike preceding studies, the paths and influences among consumer dissatisfaction, complaint behaviors, and revisiting intentions were examined, and the relationship among them was comprehensively discussed. The effects of dissatisfaction and complaint behaviors on revisiting intentions of consumers, with and without the mediating effect of complaint behaviors, were identified in order to analyze the relationship between internal dissatisfaction of consumers and complaint behavior, and how they constitute the whole structure.

Fourth, the results revealed that hair service providers should focus primarily on the human response aspects of the service delivered by the staff. Active efforts to improve customer service will be an effective measure to increase consumers' revisiting intentions. It is recommended to create customer service guidelines in order to standardize the appearance, outfit, and languages, and to provide Customer Service education. Dissatisfaction with hairstyling services was also found to lower the intention to revisit the service. Hence, as hairstyling itself is key in hairdressing services, it would be important to continuously train and manage hairstylists so that their skills are improved. It would be equally important to recognize that a systematic training system is essential for customer satisfaction and employee management and to maintain the system firmly in place.

Fifth, private complaint behaviors, out of complaint behavior variables, proved having the greatest negative effect on revisiting intentions of consumers. Hair service providers

should be aware of the importance of the word-of-mouth management and create an atmosphere where consumers feel free to express what they are not happy about instead of going back without saying anything. In particular, there is a need to focus on employee friendliness and skill so that dissatisfaction with human response services and hairstyling services does not lead to private complaint behavior. It is also important to diversify the channels through which they can communicate their dissatisfaction effectively and to create measures to double-check the customer complaints.

Sixth, it was discovered that public complaint behaviors of consumers increase their revisiting intentions. This is because dissatisfaction can be settled and problems can be solved through public complaint behaviors, which in turn make customers return. The findings show that it is necessary to lead consumers to make public complaints. For this, complaints desks with easy access should be made available to customers.

Authors' contributions

HL is the leading author of this article, originated the research idea, conducted the data analysis and drafted the manuscript. MYK guided the design of the study, and finalized the manuscript. Both authors read and approved the final manuscript.

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Competing interests

The authors declare that they have no competing interests.

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